

MultiVOIP®

Voice/Fax over IP Gateways



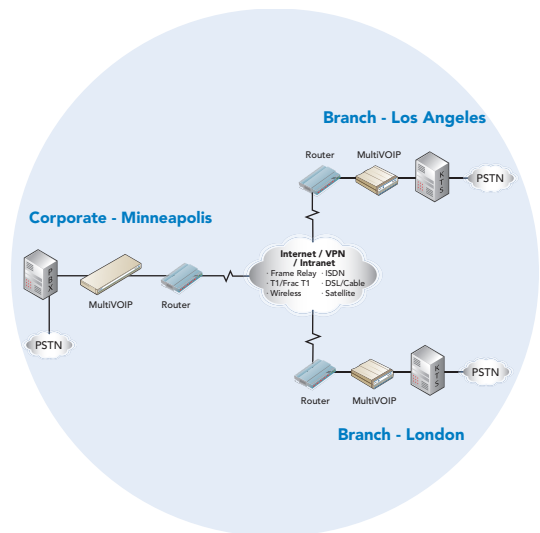
Benefits

- Toll bypass voice/fax communications
- PSTN voice quality
- Connects directly to phones, fax or PBX
- Turnkey solution

The MultiVOIP® gateway provides toll-free voice and fax communications over the Internet or Intranet. By integrating voice and fax into your existing data network, you can realize substantial savings on inter-office long distance toll charges. The MultiVOIP analog gateways are available in 1, 2, 4 and 8 port models. All MultiVOIP gateways connect directly to phones, fax machines, key systems, PSTN lines, or a PBX to provide real-time, toll-quality voice connections to any office on your VOIP network.

Features

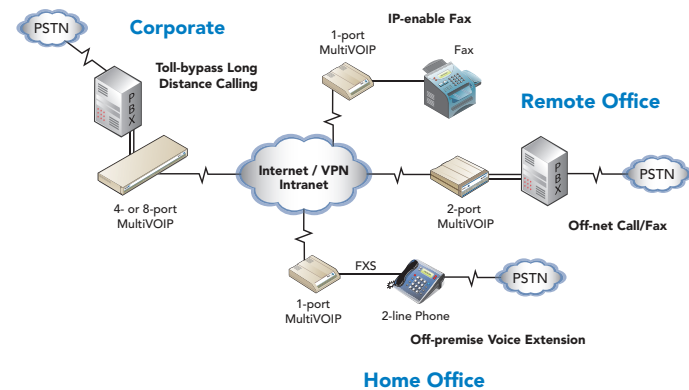
- 1, 2, 4 or 8 analog ports for communication over an existing IP network or the Internet
- Ethernet connectivity and full IP compatibility with existing routers and WAN infrastructure
- FXS/FXO/DID and E&M connectors on each channel for direct analog connection to phones, key telephones, PBX extensions, PSTN lines or PBX trunks*
- Supports H.323, SIP or SPP for sending voice over the Internet
- Single Port Protocol (SPP) allows the use of dynamic IP addresses
- PSTN fail-over automatically routes calls over the PSTN network if the IP network is down
- Supports H.450 supplementary services to provide for call transfer, call forwarding, call hold, call waiting and name identification
- Emergency transfer (power-out fail-over)
- Voice compression to 5.3K bps per call with support for multiple algorithms, including ITU G.723 and G.729
- QoS via DiffServ or 802.1p
- T.38 real-time fax relay for interoperability among other VOIP equipment
- VAD and CNG support
- Configuration and management using a Web browser or Windows
- Built-in modem for installation and maintenance on select models
- Two-year warranty



* MVP130 supports FXS, FXO and DID. MVP130-FXS supports FXS only.

Highlights

MultiVOIP Gateway Applications. The MultiVOIP gateway is specifically targeted at businesses looking to reduce toll charges between frequently called sites. It integrates seamlessly into your data network and operates alongside existing PBXs, or other phone equipment to simply extend voice capabilities to remote locations. The MultiVOIP gateway is designed to help you maximize investments you've already made in your data and voice network infrastructure.



Toll Bypass Long Distance Calling. For multi-location businesses, inter-office calling typically represents 25-40% of a company's total long distance bill. To bypass these charges, each office installs and configures a MultiVOIP gateway on their network and connects it to their existing phone equipment to place calls, send faxes, or make modem connections to the other offices on the VOIP network.

Off-net Calling. Telecommuters or customers off the IP network can make free long distance calls by dialing into a local MultiVOIP gateway and placing toll-free calls to any location on the VOIP network. You can even have a MultiVOIP gateway at a remote site dial a local phone number for a free person-to-person long distance call.

Off-premise Voice Extensions. The MultiVOIP gateway extends the reach of a company's PBX into remote office/SOHO locations without installing another PBX. Now, anyone can place calls to the remote office by simply dialing an extension number. With support for H.450 supplementary services, the MultiVOIP gateway provides for call transfer, call forwarding, call hold, call waiting and name identification. And, with the low-cost, MultiVOIP MVP130-FXS single-port analog adapter, you have the ability to inexpensively connect a single analog phone in a SOHO location.

IP-enable Fax Machines. The MultiVOIP MVP130-FXS single-port analog adapter also inexpensively turns a fax machine into an IP network capable device. With T.38 fax compatibility it promises to keep your "legacy" fax equipment productive for as long as you need it. Ideal for IP-enabling fax machines in both large enterprise networks or small branch office/SOHO locations.

Wireless Voice Extensions. To extend a PBX to a building across the street, or to a location with difficult access, utilize a wireless or satellite bridge to connect the two networks. Now, you have voice and data connectivity

without having to lay cables or pay monthly charges for dedicated lines.

Replace Expensive Tie Lines. A corporation that utilizes Tie lines to connect branch office PBXs to the corporate PBX can now use the company's IP-based Wide Area Network to complete the call.

Easy Integration. With the MultiVOIP gateway, you avoid the hassle and expense of replacing your existing routers, WAN connections or phone system required by other VOIP solutions. The MultiVOIP gateway simply plugs into your Ethernet network. Neither your phone service or network is placed at risk. Minimum requirements: Ethernet network, WAN connection, IP addresses.

Save Thousands of Dollars Each Month. The MultiVOIP gateway can save your company substantial amounts in long distance charges. Even if your company uses one of the most inexpensive calling plans, a voice over IP network can quickly return your investment and begin paying you back.

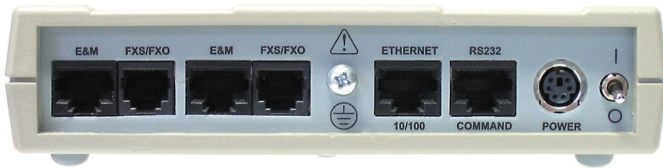
Locations	MultiVOIP Cost	Long Distance Cost/Minute	Minutes/Line/Day	MultiVOIP Payback
Corporate Site/ Minneapolis	\$1,499 MVP410 (4 lines)	\$0.04	90	104 days
Branch Site/ Los Angeles	\$899 MVP210 (2 lines)	\$0.06	60	125 days
Branch Site/ London	\$899 MVP210 (2 lines)	\$0.08	60	94 days

Interoperability. The MultiVOIP gateway utilizes the H.323 and SIP protocols to provide complete interoperability with other Internet telephony solutions. The inbound IP call protocol is automatically detected and the voice channel is dynamically configured to match. The outbound IP call protocol is configured with the phone number allowing you the flexibility to call H.323 or SIP devices from the same port. In addition, Multi-Tech has developed its own proprietary Single Port Protocol (SPP) to interoperate with other MultiVOIP gateways. The advantage of using SPP is that it requires only one static IP address allowing all other IP addresses to be dynamic. It is also easier to install behind a firewall as it only requires one open port. The MultiVOIP gateway also supports T.38 real-time fax relay for interoperability among other VOIP equipment.

PSTN Fail-over. PSTN fail-over allows the MultiVOIP gateway to automatically route calls over the PSTN network when the IP network is congested or completely down. This feature heightens reliability and augments QoS when conditions threaten to undermine voice quality. Utilizing user definable controls, the MultiVOIP gateway continually checks if the LAN/WAN is threatened by packet loss or latency, or to see if the network is completely down. If it detects a problem, the MultiVOIP gateway switches to "survivability mode" transparently routing all calls over PSTN lines connected to the MultiVOIP gateway. The MultiVOIP gateway continues to monitor the connection and automatically switches back to the LAN/WAN once the conditions improve.

Advanced Speech Technologies. The MultiVOIP gateway supports both DiffServ and 802.1p Quality of Service (QoS) protocols which set priorities for voice and fax traffic and allow for transparent delivery. The QoS protocols move time-sensitive voice traffic across even low-bandwidth WAN connections, like 56K and ISDN, with the priority and quality required by voice. Other features such as adaptive echo cancellation, forward error correction, bad frame interpolation and dynamic jitter buffers, further enhance voice quality.

Complete Support for Multiple Telephony Interfaces. For maximum investment protection, the MultiVOIP gateway two-, four- and eight-port models accommodate changing communication needs by providing a programmable FXS/FXO/DID and an E&M interface for each port. This allows the MultiVOIP gateway to connect directly to a phone, fax machine, key phone system or PBX. It automatically detects whether the incoming call is a voice or fax call. The single-port MultiVOIP gateway supports FXS, FXO and DID interfaces.



Bandwidth Management. Bandwidth is used only when someone is speaking. The silence suppression/Voice Activity Detection (VAD) feature is an option that frees unused call bandwidth for data traffic. This is significant, since callers are usually silent for 60 percent of the call. When using silence suppression, the MultiVOIP gateway also offers Comfort Noise Generation (CNG) at the receiving end so the user knows the line has not dropped. In addition, the MultiVOIP gateway supports voice compression standards like G.729 (8:1) and G.723 (10:1). These standards help minimize the bandwidth required for voice. G.723, for instance, is the maximum compression rate and requires only 5.3K bps (plus an added 7-8K bps for IP overhead). Even at maximum compression, your VOIP solution will still provide toll-quality voice.

Management. The MultiVOIP gateway is easily managed locally using a windows-based software application or remotely by the central office with a web browser or SNMP. Multi-Tech also includes its own SNMP management software called

MultiVOIPManager which provides central site configuration, management and call monitoring for all MultiVOIP gateways on the network. It utilizes a Windows interface that makes it easy to view events like usage tracking, live use reporting, call history, and voice quality statistics. In addition, MultiVOIPManager eases administration by automatically e-mailing call logs based on volume or time. The MultiVOIP gateway four- and eight-port models also include a modem for remote diagnostics, monitoring, control and configuration.

No User Training. The MultiVOIP gateway provides single stage dialing by utilizing a Uniform Dialing Plan that is consistent with the E.164 (PSTN) standard numbering plan. This includes automatic appending and stripping of digits to dialed numbers to ensure that users will not require additional training to make VOIP calls. In fact, placing calls with the MultiVOIP gateway is like using your existing phone system.

Supplementary Services. The MultiVOIP gateway supports H.450 supplementary services to provide for call transfer, call forwarding, call hold, call waiting, and name identification. It also supports Q.SIG, an inter-PBX signaling protocol, for networking PBX supplementary services in a multi- or uni-vendor environment. In addition, the MultiVOIP gateway supports SIP extensions providing call forward and call transfer capabilities.

Services and Warranty. Multi-Tech's comprehensive Support Services programs offer a full array of options to suit your specific needs. These services are aimed at protecting your investment, extending the life of your solution or product, and reducing total cost of ownership. Our seasoned technical experts, with an average tenure of more than 10 years, can walk you through smooth installations, troubleshoot issues and help you with configurations. Warranties up to 5 years are available via Multi-Tech's Extended Warranty program, which offers the convenience of Overnight Service* for optimal uptime.

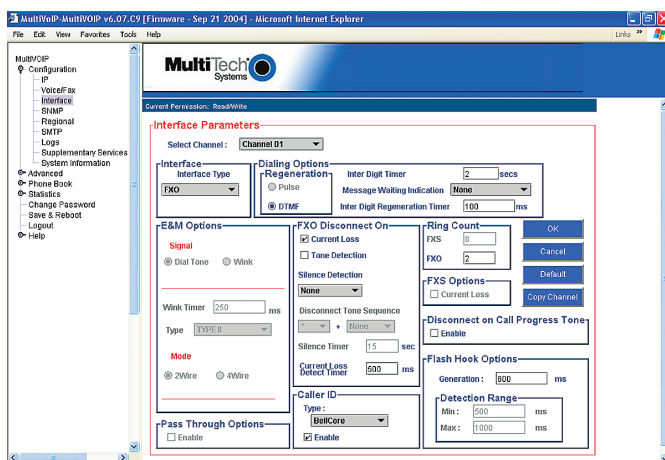
Extended Warranty and Overnight Services. To give you peace-of-mind and protect your investment, our Extended Warranty Service Plans ensure your Multi-Tech products are covered for 1, 2, or 3 years beyond the manufacturer's warranty with an optional Overnight Service plan*.

Installation Support. Multi-Tech's Installation Support Service delivers priority service with the ability to work one-on-one with an experienced Multi-Tech technical support engineer, to guide you through the installation process for our products.

Technical Support Services. At Multi-Tech, we're committed to providing you personalized attention and quality service while providing you a quick response to your product support needs. We have several options of support for you to choose from.

For additional information on Support Services as well as other service offerings, please contact your Multi-Tech representative or visit www.multitech.com/support.go.

* Overnight replacement service is currently available for U.S. customers.



Specifications

Analog Models

Number of Ports: 1, 2, 4 or 8

Port Interface: FXS, FXO, DID, & E&M support on each port (MVP130 supports FXS, FXO, & DID; MVP130-FXS supports FXS only)

FXS Interface: KTS, telephone set, or fax; ground & loop start

FXO Interface: PBX station; CO line, loop start, 2-wire

DID Service Types: Wink-start; immediate-start; delay dial

DID Signaling Type: DTMF

DID Operational Mode: Dial Pulse Originating (DPO)

E&M Interface: PBX E&M trunk; 2- or 4-wire

E&M Signal Types: I through V

Dialing: DTMF

Connectors: 1 RJ-48 (E&M); 1 RJ-11 (programmable FXS or FXO) per port

LAN Port

Format: Ethernet/Ethernet II or SNAP

Interface: 10/100BaseT

Command Port

1- & 2-Port Interface: RS-232C/D; RJ-45 (RJ-45 to DB9 cable included)

4- & 8-port Interface: RS-232C/D; DB25

Speed & Format: 115.2K bps asynchronous

Protocols

H.323 V4, SIP, SPP, H.450.2-H.450.4, H.450.6 & H.450.8, RTP, RTCP, SMTP, Q.931, Q.Sig, T.38, & Group 3 Fax relay, DTMF out-of-band (RFC 2833)

Bandwidth Management

G.711, G.723, G.726, G.727, G.729, & proprietary voice compression, silence suppression, VAD, CNG

Voice Quality

DiffServ, G.165, G.168, 802.1p, adaptive echo cancellation, forward error correction, bad frame interpolation, tunable latency, dynamic jitter buffers

Management

Web browser, Windows, SNMP agent, MultiVOIPManager, flash upgradeable

Power

Voltage & Frequency: 115V/240VAC, 47/60 Hz

Power Consumption:

1-Port Model: 9.7W

2-Port Model: 19W

4- & 8-Port Models: 46W

Dimensions

1-Port Model: 4.3" w x 1.0" h x 5.6" d; 8 oz.
(10.9 cm x 2.5 cm x 14.2 cm; 0.23 kg)

2-Port Model: 6.2" w x 1.4" h x 9.0" d; 2 lbs.
(15.7 cm x 3.6 cm x 22.9 cm; 0.91 kg)

4- & 8-Port Models: 17.3" w x 1.7" h x 8.4" d; 7.4 lbs.
(43.9 cm x 4.3 cm x 21.3 cm; 3.4 kg)

Certification

EMC: FCC Part 15 Class A, EN 55022, EN 55024, EN 61000-3-2, EN 61000-3-3

Safety: CE, UL 60950, EN 60950, cUL, ACA TS-001

Telecom: FCC Part 68, CS-03, TBR21, ACA TS-031, TBR3

Ordering Information

Product	Description	Region
MVP130-FXS*	1-Port Analog Adapter	Global
MVP130*	1-Port FXS/FXO VOIP Gateway	Global
MVP210*	2-Port VOIP Gateway	Global
MVP410*	4-Port VOIP Gateway	Global
MVP810*	8-Port VOIP Gateway	Global

* Specify country when ordering.

Produced in the US of US and non-US components.

Features and specifications are subject to change without notice.

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